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EXAMINER	
WESSENDORF, TERESA D	
ART UNIT	**PAPER NUMBER**
1639	

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/749,532	YAMAKAWA ET AL.	
	Examiner	Art Unit	
	T. D. Wessendorf	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10-12 and 15-36* is/are pending in the application.

4a) Of the above claim(s) *20-31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 10-12, 15-19 and 32-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-7, 10-12 and 15-36 are pending

Claims 20-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

Claims 1-7, 10-12, 15-19 and 32-36 are under examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7, 10-12, 15-19 and 32-36, as amended, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. [This is a new matter rejection.]

The as-filed specification does not provide support for the following amended claims:

A. Claims 1 and 32 recitation of "a first solid surface"; the entire steps b and c; "wherein the peptide of step (d) discriminates between the surfactant monolayer and the first geometrical shape." Also, the claim to "the first and second surface".

Applicants point out support at e.g., page 4, paragraph [0015] and other sections of the specification. A review of the cited sections does not provide support for the new claimed limitations.

Claims 1-7, 10-12, 15-19 and 32-36, as amended, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention and reiterated below.

To satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words,

structures, figures, diagrams, and formulas that fully set forth the claimed invention. Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was "ready for patenting" such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. See, e.g., Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 68, 119 S.Ct. 304, 312, 48 USPQ2d 1641, 1647 (1998); Eli Lilly, 119 F.3d at 1568, 43 USPQ2d at 1406; Amgen, Inc. v. Chugai Pharmaceutical, 927 F.2d 1200, 1206, 18 USPQ2d 1016, 1021 (Fed. Cir. 1991) (one must define a compound by "whatever characteristics sufficiently distinguish it").

The specification fails to provide an adequate written description for a method for identifying a peptide that binds to a surface having a target geometrical shape. The disclosure does disclose any peptide that has been identified from a phage display library that binds to a target geometrical shape. The description in the disclosure for each of the huge components of the methods is provided only in terms of definition. It does not

describe the kind and/or shape assumed by the surface to contain any kind of target. A listing or definition of every possible surface or target does not constitute a written description of every species in a genus. It would not "reasonably lead" those skilled in the art to any particular species. In re Ruschig, 379 F.2d 990, 995, 154 USPQ 118, 123 (CCPA 1967). The disclosure is replete with generalities, the exemplification even for a single species is nil. To satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the genus of the invention. Applicants are further referred to the CAFC decision in the University of California vs. Eli Lilly and Co. CAFC 43 USPQ2d 1398 7/22/1997 with respect to adequate disclosure of the scope of the presently claimed method. Adequate disclosure, like enablement, requires representative examples, which provide reasonable assurance to one skilled in the art that the compounds falling within the scope both possess the alleged utility and additionally demonstrate that applicant had possession of the full scope of the claimed invention. See In re Riat (CCPA 1964) 327 F2d 685, 140 USPQ 471; In re Barr. (CCPA 1971) 444 F 2d 349, 151 USPQ 724 (for enablement) and University of California v. Eli Lilly and Co. (for disclosure).

Response to Arguments

Applicants argue that that the method uses compositions that are known in the art (i.e., a phage display library, target surfaces). Applicants cite different sections of the specification e.g., (page 4, paragraph (0015) to page 5, paragraph (0016), that describes the use of the different compositions in the method. Applicants cite the University of Rochester v. G.D. Searle & Co., 69 USPQ. II 1886, 1894 (Fed. Cir. 2004) holding that an inventor cannot lay claim to subject matter where the method claim entails the use of an unknown compound, i.e., where a critical aspect of the method- is unknown compound defined only by its function-was hypothetical, there is no written description support. Furthermore, In In re Ruschig, 154 USPQ 118, the specific compound that was claimed was never named or otherwise exemplified in the specification as filed. In contrast, the present claims are directed to a method for identifying an unknown object using known compositions: i.e., a phage display library displaying different exogenous peptide sequences which are contacted with a defined surface to identify those peptides which selectively bind to the contacted surface. Applicants state that the phage display libraries are commercially available to contact such a surface, which phage

display library comprises phage that display different exogenous peptide sequences (i.e., a predictable property). The positive process steps as disclosed in the specification result in identifying peptides, which bind to the contacted surface, as illustrated in Figure 1.

In response, the cited sections provide no more than a list of the components that can be used in the genus claim. A "laundry list" disclosure of every possible moiety does not constitute a written description of every species in a genus because it would not "reasonably lead" those skilled in the art to any particular species. See In re Ruschig above. It will actually bar one who would have found a species in the laundry list. If the composition used in the method is known, then it is inconceivable why a single peptide species has not been described and/or obtained from the method. There is nothing in the commercially available phage display libraries that recites the predictable property of the phage, which applicants state, contain numerous different exogenous peptide sequences. (See further the enablement rejection below). The instant method is similar to the University of Rochester, since the instant claimed method failed to identify a peptide with the function of binding to a surface of geometrical surface. There is no disclosure that the peptide binds only to a surface of

geometrical surface. In Ruschig, a specific compound has been obtained from the genus claim except not named. The instant method failed not only to identify a peptide with the claimed function using the claimed method, let alone name said peptide.

Claims 1-7, 10-12, 15-19 and 32-36, as amended, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, as repeated below.

The factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure satisfies the enablement requirement and whether any necessary experimentation is "undue" include:

(1) the breadth of the claims,
(2) the nature of the invention,
(3) the state of the prior art,
(4) the level of one of ordinary skill;
(5) the level of predictability in the art,
(6) the amount of direction provided by the inventor,
(7) the existence of working examples, and
(8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.
In re Wands, (U.S.P.Q. 2d 1400 (CAFC 1988).

1). The specification fails to give adequate direction and guidance in how to readily go about determining the surface

having a target geometrical shape e.g., the kind of geometrical shape, the conditions of peptide-target reactions and other undefined factors or variables. It does not describe the kind, type, location and length of peptide in a phage display library.

2). The specification failed to provide a single working example for a single component included in the innumerable components of the broad claimed scope.

3). The breadth of the claims encompasses a large diversity of surface having a target geometrical shape, phage display library and the other undefined broad components. It is well known in the art that it may be for example, that only a small subset of possible peptide sequences are presented efficiently by a particular phage and/or expression system. And, it is not always easy to follow the expression of peptides in particular cells; for example, to know whether or not a specific cell is expressing a member of the insert, especially for biological methods.

4). The state of the prior art is such that techniques are specifically applied for a predetermined target and/or phage display library.

5). The art is inherently unpredictable because it is not possible to predict which surface containing a target of the required geometrical shape a peptide binds thereto. It is

generally known that the conformational freedom that promotes binding, might be restricted which may likely perturb the function and stability of the protein in ways difficult to predict and measure.

6). Because the art is unpredictable, applicants' specification reasonably would not have assured persons skilled in the art that the numerous undefined components such as peptide, target and surface of any geometrical shape would result in the identification of a peptide from a library without undue experimentation. This is especially true since not a single peptide has obtained from the method. Applicants do not adequately enable persons skilled in the art to readily determine such. Applicants need not guarantee the success of the full scope of the claimed invention. However, skilled artisans are provided with little assurance of success.

Response to Arguments

Applicants state that to establish enablement, nothing more than objective enablement is required, and therefore it is irrelevant whether this teaching is provided through broad terminology or illustrative examples. The amended claims read on phage display libraries. "Phage display library'' is an art

recognized term, including that such libraries have well known/defined properties) and a defined surface. Further, because it is well recognized that phage display libraries represent a general class of replicable, mutable chemicals (see, e.g., Exhibit A, Smith and Patrenko, Chem. Rev. (1997) 97:391-410), this alone would support the conclusion that phage display libraries falling within the scope of the invention would generally have the same likelihood of success in the practice of the invention as claimed (i.e., phage libraries are inherently capable of serving as a way to effect artificial chemical evolution, such that members of the library, in the aggregate, can be used to identify amino acid sequences that specifically bind to various surfaces). See, e.g., Exhibit A and Exhibit B. Regarding the Wands factors recited, 1) the embraced surfaces are recited in the specification (e.g., at page 5, paragraph (0016), including the geometric shapes presented by such surfaces (page 5, paragraph (0015)), which are well known, further, the conditions for peptide binding to target and elution are well known (i.e., via adjusting pH, using denaturing agents, proteases etc. (see, e.g., Exhibits A and B)) and/or disclosed (at page 6, paragraph (0019) and page 7, paragraph (0026). Moreover, the location and length of the

exogenous peptide on the phage in the library is inherently limited by phage physiology (one of skill in the art would be cognizant of this fact); 2) regarding examples, as stated in In re Marzocchi, requiring of examples is not the standard for enablement, especially where claims cover compositions that are well known/closely related; 3) the position of the Action with regard to claim breadth is unclear, nevertheless, a small subset of representative peptide sequences would be expected, in fact, all that would be necessary for success is one. Further, as the peptides that are useful for chemical evolution are synthesized on the surface of phage, it is not clear as to why the limitations of cell expression are recited in the Action; 4) contrary to the position that art recognized techniques are specifically applied for a predetermined target, the claims as recited are also directed to a predetermined target (i.e., surface comprising a surfactant monolayer); 5) it is not clear why it would be a general requirement to know the conformational freedom related to why a peptide binds to a surface before the peptide has been identified. Certainly one of skill in the art, given the general success in the use of phage display derived peptides, would predict that phage could be used to identify peptides that bind to surfaces in the absence of undue experimentation, that is all that is required; and 6) it is not

clear why for a method which is directed to identifying a peptide, one of skill in the art must know the identity of the peptide beforehand.

In response, there is no objective enablement in the specification since not a single (desired) peptide has been enabled from the broad claimed method. The method recites broadly undefined structure or features for each of the alleged known compositions. It is not the term "phage display library" that is at issue. Rather, the unpredictable expression of phage in combination with the broad undefined structures especially in view of applicants' statement that phage is a replicable and ***mutable*** chemical. The references, newly submitted by applicants, provide support for said unpredictability. Smith et al (Exhibit A) state "…….. phage display is an exponentially growing ***research area…***" (Emphasis added). Likewise, Russell (Exhibit B) Russell (Exhibit B) states at page 21, "an assumption made when a diversified library is created for phage display is that all clones will display with similar efficiency. In fact, some sequences will be refractory to display and therefore underrepresented in the displayed library-in the extreme, the optimal clone (e.g. the one with highest affinity) may never be isolated because it fails to display. For example, in peptide libraries, cysteine residues are often rarer than expected based

on predictions of randomness. This has been attributed to reduced display due to formation of inappropriate disulfide bonds…... Other sequences may be toxic to E. coli or interfere with phage assembly, or be sensitive to bacterial proteases. This "expression editing" means that one cannot ***assume*** that every clone theoretically contained within a library has indeed been surveyed in a binding selection." The lack of enablement for even a single peptide, using the broad method steps using broad components e.g., phage display library is sufficient to question the scope of the broad claimed method. Applicants' arguments with respect to In re Wands (1) are no more than a repetition of the generalized statements in the specification. (2). Examples might not be required for a predicable art as mechanical. In a highly unpredictable art as biotechnology for example, phage expression, a priori prediction, has not been known in the art as discussed by Russell. Applicants' assertion of the known composition being closely related is unclear. Are the compositions closely related in function or structure (there is not a single component with a structure)? Just how close are "closely" related are the compositions e.g., what it includes or excludes. 3). Applicants has not shown where a representative example, let alone a single example, has been exemplified. The unpredictability of cell expression is essential as to whether

the broad claimed phage exhibit cell expression of the desired peptide. Phage display library expression is but one component of the numerous components that are embraced by the broad genus compositions. 4). The claim does not recite a predetermined target. Rather only a surfactant. Is this the target? The body of the claims, as amended, does not recite a target embedded or contained in the surfactant. 5). Applicants' arguments with respect to the success of phage have been taken so broadly. Each of Exhibits A and B has described that the success of the phage mutation/expression depends upon several factors. One of which is the correct transfection of a component in a phage. Even specific components, as Russell states, at times are not even expressed or if expressed, may be underrepresented. 6). Applicants have not been required to identify the peptide before hand, as it is recognized this is what is being screened. Rather, there is no peptide that has been identified or obtained from the broad claimed process steps.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

In view of the amendments to the claims and cancellation of some of the claims, the rejection of the claims 5, 6, 8, 15 and 19 under 35 U.S.C. 112, second paragraph is withdrawn. However, claims 1-7, 10-12, 15-19 and 32-36, as amended, are rejected under 35 USC, 112, second paragraph as follows:

1. The amendments to claim 1 are confusing as to what is actually being claimed. The preamble recites binding to a target in the surface in order to identify a peptide. The body of the claim recites the peptide binding to a surfactant monolayer without reciting whether the surfactant monolayer is layered with a target. Is the surfactant laid with the target? Does the peptide bind to the self-assembled surfactant alone? It is not clear how an exogenous peptide is expressed by a phage contained in a surfactant monolayer solid surface. Step (b) does not seem to correlate with step (a), specifically with the recitation of "wherein phage that bind to the second surface are excluded….". Furthermore, step c is unclear as to the repetition of step g. There appears a lack of correlation or relevance as to newly added limitation "wherein the peptide of step (d) discriminates between the surfactant monolayer and the first geometrical shape". The claim seems to contain several embodiments.

The terms first and second surfaces are relative terms and therefore indefinite. These terms are not defined by the claim,

the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Withdrawn Rejection

In view of the amendments to the claims the 35 USC 102 rejection over Naik, Belcher and Lee has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 10-12, 15-19 and 32-36, as amended, are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Naik or Belcher or Lee in view Puentes and applicants' admission of the known prior art.

Naik discloses at page 169, cols. 1 and 2 a method of identifying a silver binding peptides from a combinatorial phage display peptide library comprising contacting a phage display peptide library with a inorganic surface, as silver. Naik discloses at page 170 up to page 171 that the silver particles were analyzed by transmission electron microscope. The

examination of the silver nanoparticles obtained using AG4 peptide revealed the presence of hexagonal, spherical and triangular silver particles. The silver crystal exhibited a flat plate-like morphology. See further the Methods at page 172 which provide a detail description of the method.

Belcher discloses in the abstract a method for selective binding of amino acid oligomers to semiconductor and elemental carbon-containing materials. Belcher discloses at [0047] that "elemental carbon-containing molecule" generally refers to allotropic forms of carbon. Examples include, but are not limited to, diamond, graphite and highly ordered pyrolytic graphite (HOPG). At paragraph [0048] the "substrate" may be a microfabricated solid surface to which molecules attach through either covalent or non-covalent bonds and includes, e.g., silicon, mica, gold, silver, metal, metal alloy and combinations thereof capable of having functional groups such as amino, carboxyl, thiol or hydroxyl incorporated on its surface. The substrate may be porous, planar or nonplanar. The substrate includes a contacting surface that may be the substrate itself or a second layer (e.g., substrate or biologic material with a contacting surface) made of organic or inorganic molecules and to which organic or inorganic molecules may contact. Belcher

discloses that previously it was shown that peptides may bind to semiconductor material. Semiconductor materials useful in binding peptides include, but are not limited to gallium arsenide, indium phosphate, gallium nitrate, zinc sulfide, aluminum arsenide, aluminum gallium arsenide, cadmium sulfide, cadmium selenide, zinc selenide, lead sulfide, boron nitride and silicon. At paragraph [0054] it was disclosed that the method provides a random organic polymer pool using a Phage-display library. A Phage-display library is a combinatorial library of random peptides containing between 7 and 12 amino acids fused to the pIII coat protein of M13 coliphage, providing different peptides that are reactive with crystalline semiconductor structures or other materials. At paragraph [0055] peptide sequences have been developed with affinities for various materials such as semiconductors, and elemental carbon-containing molecules such as graphite. At paragraph [0056] Belcher discloses that using a Phage-display library, protein sequences that successfully bound to the specific crystal were eluted from the surface, amplified by, e.g., a million-fold, and reacted against the substrate under more stringent conditions. This procedure was repeated between three and seven times to select the phage in the library with the most specific binding peptides. After, e.g., the third, fourth and fifth rounds of phage selection, crystal-specific phage were

isolated and their DNA sequenced, identifying the peptide binding that is selective for the crystal composition (for example, binding to GaAs but not to Si) and crystalline face (for example, binding to (100) GaAs, but not to (111)B GaAs).

Lee discloses at page 893, Fig. 1 a method of identifying peptide by contacting a phage library with a surface comprising a target with a geometrical shape. See the entire article.

Each of Naik, Belcher and Lee does not disclose a surface comprising a surfactant. Puentes teaches that the use of surfactant results in the preparation of wide range of shapes including rod, teardrops, and tetrapods and branched tetrapods. The shapes can be made simply by varying surfactant compositions as learned from the prototypical CdSe system. Applicants admit that typically self-assembled surfactant monolayer is well known in the art and is accomplished by either growing the SAM from solution or from the gas phase (Colorado and Lee (2001)). Accordingly, it would have been obvious to use a surfactant in the method of each of Naik or Belcher or Lee for the advantages taught by Puentes. As admitted by applicants to make a self-assembled monolayer surfactant is known in the art citing Colorado reference.

Applicants' arguments in view of Puentes alone, is moot in view of the new art cited by applicants i.e., Colorado.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Naik or Belcher or Lee in view of applicants' admission of known prior art, as applied to claims 1-16 and 18-19 above, and further in view of Freeman et al (Science) as reiterated below.

Naik or Belcher or Lee does not disclose a surface with a Teflon as recited in claim 17. However, Freeman at page 1629 teaches a substrate comprising Teflon. Freeman discloses that the Teflon is conventionally used as a substrate. The solution-based process taught by Freeman is extremely general encompassing numerous permutations of insulating and conducting substrates including Teflon. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use as a surface substrate, Teflon in the method of e.g., Naik as taught by Freeman. The different permutations that can be done to the conventional substrate as Teflon as taught by Freeman would provide the motivation to one having ordinary skill in the art, at the time the invention was made.

Response to Arguments

Applicants state that a review of Freeman et al. demonstrates that the reference is silent with respect to surfactants.

In reply, Freeman is employed not for the purpose as argued since the surfactant, as applicants admitted above, is known in the art. Rather, Freeman is employed for the motivation it provides to one having ordinary skill in the art in the use of the known Teflon product.

No claim is allowed.

Conclusion

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

This application contains claims 20-31 drawn to a non-elected invention. A complete reply to the final rejection must

include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. D. Wessendorf whose telephone number is(571) 272-0812. The examiner can normally be reached on Flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. D. Wessendorf
Primary Examiner
Art Unit 1639

tdw
March 31, 2006